# Homework and minority students in difficulty with learning mathematics

The influence of public discourse

# Troels Lange

In this paper, I contrast an immigrant 10 years old girl's perception of her home support and her mathematics teacher's rather different perception. I show how the girl tries to align her perception of her home support with middle class Danish family values, and how the public discourse about immigrants apparently frames the teacher's perception of the resources that are available or not available to the girl. The analysis becomes an example of how mathematics teaching and learning are embedded in a wider socio-political field. It suggests that sometimes resources could be available that schools do not see because students are constructed as disadvantaged.

In recent years, immigrant<sup>1</sup> students' school performances have become subject of concern among politicians, administrators, school authorities etc., as evidenced by the follow up report *Where immigrant students succeed* (OECD, 2006) on the PISA 2003 survey (OECD, 2004), that investigated immigrant students specifically. In many of the participating countries, the average performances of immigrant students were found to be lower, often much lower, than native students performed poorly academically. Similar to many other countries, the differences in performance between immigrant and native students could only partly be explained by differences in the socio-economic background of the students including the educational background of their parents. Part of the differences were seen to be related to the students' immigrant status such as whether the

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language spoken at home was the language of instruction, and the age at the time of immigration (for first generation immigrants).

Taken as a group, minority students in Denmark can be seen as underachievers (Holmen, 2008). The explanation for this underachievement accepted by politicians and bureaucrats determines how it is dealt with. In 2007, a national survey attributed this lower performance in large part to communication patterns and cultural capital of the immigrant families (Rockwool Fondens Forskningsenhed, 2007a). Consequently, the educational policy can be seen as drawing upon a notion of deficiency of the immigrant students and their families with respect to linguistic mastery of Danish and integration in Danish culture (Holmen, 2008).

National PISA surveys, PISA København-2004 (Egelund & Rangvid, 2005) and PISA Etnisk 2005 (Egelund, Jensen & Tranæs, 2007) detailed the picture of the school performances of immigrant students of non-Western origin. It was found that the average performance of immigrant students in reading, mathematics, and science was alarmingly poor, worse than expected, and much lower than the average of their fellow native students. Again, the difference could not be fully explained by the generally lower socio-economic circumstances and educational background of the immigrant population compared to the native population. The latter report found that neither could the differences be related to school conditions. No clear difference was found between immigrant and native students' feelings of belonging to the school, their perception of the relation between students' and teachers, and the disciplinary climate. Neither did clear differences arise from the school leaders' assessment of the degree to which the teaching was hampered by student or teacher behaviour. lack of teaching materials and qualified teachers. Rather, according to the report, the explanation was to be found largely in the students' home culture. A newsletter summarising the results of the report to the public illustrates the tone of the message:

The picture is quite clear: It is of little use to look at the schools if you shall find explanations to the relatively weak reading skills among young bilingual [students. See note 1]. [...] [The survey] shows that it is decisive which other language [than Danish] a bilingual student speaks at home. Those who speak Arabic with their parents have a tremendous tendency to lack reading skills [...] The situation is completely different if you speak Punjabi or Urdu [...]

(Rockwool Fondens Forskningsenhed, 2007a, p. 5; my translation) The home language was seen to be bound up with the family culture understood as types of behaviour and communication. It was found that family support for homework was five times higher in native Danish families than in immigrant families. Similarly, the levels "social communication" was found to be three times higher and "cultural communication" ten times higher in native Danish families<sup>2</sup>. The parents' income, taken to signify their level of integration in the labour market, also had a great impact on the immigrant students' school performances (Rockwool Fondens Forskningsenhed, 2007a).

The report was given wide attention in the media. The minister of education was "worried", repeated what measures had already been taken by the government addressing the issues, and promised his support to the local authorities (Rockwool Fondens Forskningsenhed, 2007a). The educational spokesperson of the Social Democratic Party (the leading opposition party at the time) concluded that the necessary actions had to start with the parents in the children's homes. Without crossing the threshold of private life, it would not be possible to deal effectively with the problem. The parents had to have a job and become integrated in the Danish society via the labour market. The children had to be "integrated" in the family, the meaning of which was explained as follows:

What does it mean that children are integrated in the family. It is *homes where children are talked to* and not *at*<sup>3</sup>. It is homes where the parents support the children in their schoolwork with homework. It is homes where you are interested in what each other does and ask after big and small things that have happened during the day, and what you have experienced and thought. And it is homes where the family go on trips together, visit museums, talk about the events of the day on television, the new movies etc. On all the circumstances there is a marked difference in bilingual families and in Danish families.

> (Rockwool Fondens Forskningsenhed, 2007a, p. 14; my translation, italics in original).

A well-respected principal at an inner Copenhagen school with a high proportion of immigrant students agreed to the importance of the communication in the families:

[T]he biggest gap between the Danish and the ethnic children's achievements is in science and that is no surprise, because it is here that it "works through" that there is no conversation culture in most of the ethnic homes.

[...] We must work harder to get the necessary close contact with the families so that we can get the parents to understand how important it is that both mum and dad talk to their children, take interest in their schooling, attend the meetings at the school, ask about the children's well-being etc.

[...] This survey confirms my contention of the great importance of the dining table! Here it is seen that it is the very way you talk in typical Danish families and in typical ethnic families, that is the "cultural communication", which is ten times higher in a Danish than a in an ethnic family, and here I think, that that is connected with the dining table you gather around every evening versus the individual eating at the coffee table in the ethnic families.

> (Rockwool Fondens Forskningsenhed, 2007a, p. 17; my translation, quotation marks in original)

In these two quotations, it is seen that the idea that immigrant students low school performance was to be explained with reference to presumably cultural features specific of immigrant families was readily accepted. It seemed to resonate strongly with existing presumptions and lent itself easily to further elaboration.

#### Homework

Mathematics education is a complex social practice (Valero, 2002) of which homework is a part. Homework is a central "meeting place" for school and home. School and home culture, values, norms, expectations, and resources meet with the student/child (student at school, child at home) as the meeting ground. Homework could therefore be seen as a strategy that has the possibility of bridging school practices and family practices in an attempt to both influencing children's school performance and enriching the family involvement and capacity to support children's school life (Anthony & Walshaw, 2007; Civil, Díez-Palomar, Menéndez & Acosta-Iriqui, 2008).

However, there are problematic issues with homework as a pedagogical practice. One is whether it helps students' learning. Quantitative studies report little effect of homework on students' achievement in elementary school (Inglis, 2005). Nonetheless homework is recommended with the purpose of fostering "positive attitudes, habits, and character traits; permit appropriate parent involvement; and reinforce learning of simple skills introduced in class" (Marzano & Pickering, 2007; Grade Level section). As the quote illustrates, talk about homework is often embedded in a moralistic language, which takes certain values as given, in this case what is seen as *positive* and *appropriate*. It hides the fact that assigning of homework is also exertion of teacher power over students, a way of controlling students' behaviour in and out of school time, and a way of asserting school norms and values. In fact, some students think of homework as appropriating their free time (Lange, 2008).

Equity is another problematic issue. Homework interacts in complex ways with the students' dispositions and their social environment. As pointed out by Merttens (1999) the outcome can be quite different from the intended depending on how particular forms of homework interact with the actual contexts in which children manage their homework:

How [homework] is done is more important than that it is done, because the how will make the difference between supporting children's learning and facilitating the collaboration of their parents, or it becoming yet another element in an education system in which the benefits are differentially available, according to socio-economic class, gender or ethnicity.

(Merttens, 1999, p. 79 cited in Anthony & Walshaw, 2007, p. 168) A third problematic aspect is that homework assignments affect the relationship between children and their parents. Bratton, Civil and Quintos (2005) found this relationship was affected even more when the parents were not fluent in the majority language as shown by the case of Mexican immigrant in USA. Abreu (2005) has shown how some immigrant children have to separate the 'schools way' of doing maths (algorithms) from their parents' way, and Abreu and Cline (2007) argue that children from low socio-economic background develop awareness of the different social valorisations of school culture and their home culture with its mathematical practices.

The issue of whether homework contributes to effectively bridge the gap between school and home is far from easy to resolve. However, the research studies examined above suggest that homework is not a neutral player in school practices. More often than not, it has the potential of evidencing the differential resources that students have at home, and thereby contributing to the construction of some students as disadvantaged. Valero (2007) discussed how advantaged and disadvantaged positions for participation in mathematics education practices are constructed in the school organisation where homework is seen to be an important component. In this paper, I give another example of how mathematics education practices construct disadvantaged positions for some students with particular characteristics. I show how Kalila<sup>4</sup>, a 10 years old second-generation immigrant girl, tries to align her perception of her home support with middle class Danish family values, and how the public discourse about immigrants apparently frames the teacher's perception of the resources that are available or not available to the girl. The analysis becomes an example of how mathematics teaching and learning is embedded in a wider socio-political field. On one hand, the analysis illustrates that the family resources called upon by homework are very differentially available to children with different backgrounds. On the other hand, it suggests that sometimes resources could be available that schools do not see because students are constructed as disadvantaged.

# Methodology

This paper is part of a larger study aimed at exploring students' perspectives on mathematics learning in general and in particular from their experiences of being in difficulties with learning mathematics (Lange, 2007). The empirical material produced in this study is interviews with children aged 10 or 11 years and observations of their mathematics classes. The children were students in a year 4 class in a Danish folkeskole, i.e. a public school. There were twenty students in the class with equal numbers of boys and girls as well as an equal number of what the children referred to as Arabs or Danes. All were born in Denmark and spoke the same local variant of Danish. However, the Arabs were descendents of parents emigrated from the Middle East and hence second generation immigrants in official terms (cf. note 1). In the local community, immigrants were a minority. About a guarter of the students at the school had immigrant background. With its even distribution of native Danish and immigrant children, the composition of this particular class was unusual.

The mathematics lessons of the class were observed for almost a complete school year on a more or less weekly basis. Three rounds of interviews were conducted. In the first round, all students but one were interviewed in groups of six or seven students. In the second, approximately half of the students were interviewed in pairs or alone. Half of the students were also interviewed in pairs in the third round. Some students took part in both the second and third round. The interviews lasted from 30 to 45 minutes and were audio recorded; the group interviews were video recorded as well. The students' mathematics' teacher was interviewed in the third round of interviews.

The interviews were semi-structured qualitative research interviews that aimed to explore and understand the experiences and *life world* of students in relation to school mathematics teaching and learning (Kvale, 1996; Goodson, 2005; Goodson & Sikes, 2001). Students that in my judgement, after having seen them in the classroom, could be low performing in school mathematics were generally the ones asked to participate in the pair and single interviews. I assumed that interviewing low performing students could produce interesting and valuable insights into school mathematics education (see Lange, 2007).

In this paper, I interpret excerpts from three interviews: a single interview with Kalila in the second round; a paired interview with her and another second-generation immigrant girl in the third round; and the interview with the mathematics teacher, also in the third round. Observations and other interviews inform the choice of excerpts and interpretations but are not analysed in this context.

In presenting transcripts, two choices have been made. The first was to quote in some length, and the second to give the original Danish transcript together with a translation into English. The reason for the first choice concerns the difference between the researcher's voice in a summary and the interviewee's own voice (although filtered through a transcription). Goodson and Sikes (2001; ch. 3) discuss this issue and exemplify that in some cases the difference can be dramatic as to the impression the reader gets of the interviewees and their stories. As the interest in this research is on children's perspectives on mathematics education, and as children of the age in question express themselves differently from adults, linguistically, grammatically and from a different perspective, it is important to render their ways of expressing themselves as a starting point of the interpretation.

The Danish transcript is given because that is what is analysed. The transcript is as close as possible to the wording of the recordings. As a translation that conveys the subtleties of a transcript of children's spoken Danish into what could be a transcript of children's spoken English is neither simple nor always possible, a rather literal translation has been chosen at the expense of what might be considered good English by native speakers of one of the versions of this language.

#### Homework support

In many of the mathematics classes I observed, the teacher would assign the students to work on a number of problems and their homework would be what they did not finish in the lesson. According to my experience as teacher educator, this practice is very common in Danish classrooms and not specific to this particular teacher. All the same, it constructed homework as a sort of punishment for not being on task, quick, able, knowing what to do, listening to instruction, etc.

In the following, I first present how Kalila perceives the support she gets at home for her homework, and how the teacher perceives it, and continue with Kalila's perception of how her big sister helps her. The argument will be that the help Kalila receives from her sister seems appropriate. Second, I will present how the teacher perceives the language knowledge of the immigrant children and explain this with reference to patterns of communication in immigrant families. I will show how the teacher's perception echoes explanations "floating around" in the public discourse presented above. Third I will discuss how both Kalila and the teacher can be seen as aligning with the conception of normality in the majority Danish culture.

In the first interview with Kalila, I asked her if somebody helped her with her homework. The transcript<sup>5</sup> gives the dialogue and shows the style of interviewing.

#### Transcript 1. Interview with Kalila November 2006 (36:04-36:50)

|    |        | Original Danish transcript   | Translated English transcript  |
|----|--------|--|--|
| 1  | Troels | Er der nogen der hjælper dig<br>når du laver lektier?  | Is there somebody that helps you when you do your homework?  |
| 2  | Kalila | Det er min far   | It is my dad   |
| 3  | Troels | Det gør din far. Ok. Gør han<br>det hver dag eller engang<br>imellem?  | Your dad does. Ok. Does he do that every day or sometimes?   |
| 4  | Kalila | Altså det er også min<br>storesøster   | That is, it is also my big sister  |
| 5  | Troels | Også din storesøster, ja   | Also your big sister, yes  |
| 6  | Kalila | Mest min storesøster   | Mostly my big sister   |
| 7  | Troels | Mest din storesøster, ja   | Mostly your big sister, yes  |
| 8  | Kalila | Fordi min far han er sådan<br>mest i forretningen (ja, ja).<br>Man kan godt sige det er min<br>storesøster   | Because my dad he is like mostly<br>in the shop (yes yes). You can<br>pretty well say it is my big sister  |
| 9  | Troels | Ja ok. Hvornår gør din far det?  | Yes ok. When does your dad do it?  |
| 10 | Kalila | Altså det er når - for nogle<br>gange der sådan sådan stopper<br>inde i forretningen (ja) $\_$ så så<br>når han er hjemme tidligt eller<br>træt og sådan noget så hjælper<br>han mig | Well that is when - 'cause some-<br>times then like like [he] finishes<br>in the shop (yes) $\_$ then then<br>when he is at home early or tired<br>or like that then he helps me |
| 11 | Troels | Ja ok. Ellers er det mest din<br>storesøster der hjælper dig?  | Yes ok. Otherwise it is mostly your big sister that helps you?   |
| 12 | Kalila | Ja   | Yes  |

| 13 | Troels | Ja ok. Siger du hun går i 10. | Yes ok. Do you say that she is in   |
|----|--------|-------------------------------|---|
|    |        | klasse?                       | Year-10?  |
| 14 | Kalila | 0                             | I think it is ten or the gymna-<br>sium (ok) I really don't remem-<br>ber |

The transcript shows that Kalila's big sister helps her with her homework (4–12; here and in the following, numbers in brackets refer to line numbers in the transcript). Her sister is in year-10 or the gymnasium (upper secondary school) (13–14). Sometimes her father helps her (2, 10). In her family Kalila was the fourth of six children; her sister was the eldest of the siblings and being in her tenth school year she was probably 16–17 years old.

Kalila's story about who is helping her with her homework developed from "it is my dad" (2) to "also my big sister" (4) to "mostly my big sister" (6) and ended with "you can pretty well say it is my big sister" (8) – with the addition that her father occasionally helped her (10). A discussion of how this may be aligning with perceptions of the type of help she was supposed to get at home occurs in the final section of the paper.

In the interview with the mathematics teacher, I asked her to group the students in three groups according to their mathematical competence. Five of the seven children in the group with the least competence were minority children. The teacher saw a clear connection to family support in that four of the five minority children in her view had little support to their school work. Kalila and another student had no support: "There is no backing, there is nothing at all". The two other children had only little support: "If there is anybody that helps then it is often a big sister".

The teacher's general opinion seemed to be that parents should help their children with their homework and that big sisters were not appropriate helpers. She was apparently unaware that Kalila's big sister was helping her. At 16 to 17 years old, the sister was a young adult and contrary to Kalila's parents, she had gone to school in Denmark and could be supposed to know the school culture and the social practices of mathematics education in the Danish *folkeskole* much better than her parents did.

In a later interview with Kalila and Maha, also an immigrant student, big sister help with homework was confirmed as normal practice. The girls contributed details about the form of help they received. The interview took place about the same time as the interview with the teacher quoted above.

# Transcript 2. Interview with Kalila and Maha May 2007 (15:18–16:39)

| 15 | Troels | Er der nogen der hjælper dig<br>med lektier der hjemme?  | Is there somebody that helps<br>you with your homework at<br>home?   |
|----|--------|--|--|
| 16 | Kalila | Ja   | Yes  |
| 17 | Maha   | Min storesøster  | My big sister  |
| 18 | Troels | Din storesøster ja   | Your big sister yes  |
| 19 | Kalila | Altså ved mig er der, er det ikke<br>hun laver det for mig men   | You see by me there is, is it not<br>she makes it for me but [she<br>does not do it for me]  |
| 20 | Maha   | Nej. Hvis der nu er noget jeg<br>ikke kan, altså den der (en<br>opgave i deres lærebog) den<br>forstod jeg ikke helt (nej ok) så<br>forklarer min storesøster det<br>(nå ok)   | No. If there is something I cannot, that [a problem in the textbook] that I did not quite understand (no ok) then my big sister explains it (well ok)  |
| 21 | Kalila | Altså for eksempel hvis nu<br>tager vi for eksempel, hvis det<br>var for eksempel to plus to for<br>eksempel (ja ok) ja og så [siger]<br>hun hvad er to plus to. Og der<br>er mange regnestykker af dem<br>(mm). Ikke _ fem plus fem. Og<br>så prøver hun at forklare mig<br>det så tager hun et stykke papir.<br>"Du har to, og du plusser to<br>mere" altså sådan to tre | For example now if we take for<br>example, if it was for example<br>two plus two (yes ok) yes and<br>then she [says] what is two plus<br>two. And there are many prob-<br>lems[of that sort?](mm). Aren't<br>there _ five plus five. And then<br>she tries to explain it to me so<br>she takes a piece of paper. "You<br>have two, and you plus two<br>more" that is two three |
| 22 | Maha   | "Hvad er et plus et?"  | "What is one plus one?"  |
| 23 | Kalila | Ja. Og så hvad er, hvis du skal<br>sige et plus et, det ved jeg ikke.<br>hvis jeg nu vidste det, det er to.<br>"Så gør det to gange". "Et plus et<br>det er to". "Et plus et det er to".<br>Så giver det jo fire. Så laver hun,<br>så hjælper hun mig, med mig<br>med det første og så _ andre og<br>så har jeg forstået det   | Yes. And then what is, if you<br>shall say one plus one, I don't<br>know that. If I knew, it is two.<br>"Then do it two times". "One<br>plus one that is two". "One plus<br>one that is two". So that makes<br>four. Then she makes, then she<br>helps me, with me with the<br>first and then _ the others and<br>then I have understood it                                    |

| 24 | Troels | Så jeres storesøster de er sådan,<br>de gør ligesom et lærer ville gøre<br>lyder det til. Er det rigtigt? | So your big sisters they are like,<br>they do like a teacher would do,<br>it sounds. Is that right? |
|----|--------|---|---|
| 25 | Maha   | Ja  | Yes   |
| 26 | Kalila | Jaah (trækker lidt på det?)   | Yeah [hesitating a little?]   |
| 27 | Troels | Ja mm ja  | Yes mm yes  |
| 28 | Maha   | Altså _ altså "To plus to hvad er<br>det?" "Det er fire." "Så skal du<br>bare skrive det ned"             | You see _ you see "two plus two<br>what is that?" "It is four." "Then<br>you just write it down"    |

An elder sister helps both Kalila and Maha with their homework (15-19) when they need it (20). The sisters explain the problems in the textbook (20) and ask them questions to make them understand (21–23) so that they can do the tasks by themselves (23).

To these two girls, big sister help was an established way of dealing with their homework. Their description indicated that their sisters attempted to activate knowledge relevant to the situation (21–23, 28) and thus took on a teacher-like approach (24–26). The sisters seemed to have reflected on their role as helper. Kalila had considered the kind of help she had from her sister. This can be seen when, on her own initiative, Kalila pointed out that her sister did not do her homework (19) but instead asked her questions to support her understanding (21, 23, 28). Thus, the support the girls got from their sisters seemed relevant, sensible and considered, and not different from the support native Danish parents could be expected or hoped to give to their children<sup>6</sup>.

#### Influence of public discourse

As seen above, the teacher felt that Kalila received no support from her home. This raises the question about why the teacher did not recognise the resources actually present for Kalila in her family even if she did not think of big sisters as proper homework supporters. In this respect, the teacher's general view on immigrant students is informative.

In the interview, the teacher said that the bilingual children's knowledge of words and concepts was much less than the Danish children's knowledge. She saw this as a consequence of communication patterns in the families.

And that is logical indeed because these words - generally I do not at all think that bilingual parents talk with their children as Danish parents do. They don't get talked - they get talked *at*, but I don't think they get talked *to*. That you sit down and say, "this is a blue car and the car says broom". I don't think – it is my feeling that it does not happen at all. (Interview with teacher, May 2007)

In other words, the teacher assumed that the communication between children and parents in immigrant families was less dialogic and more directive compared to native Danish families. She further assumed that this led to immigrant children being less competent in academic Danish than native students were. Hence, the teacher endorsed the same explanation for immigrant students' school performance as the report described in the introductory section (Rockwool Fondens Forskningsenhed, 2007a). The core of her argument (children getting talked at versus *talked to*) was the same phrasing as used by the spokesperson of the Social Democratic Party. Thus, the teacher's perception was not her personal idiosyncratic construction of an explanation for her experiences as a teacher of immigrant students. Rather, her assertion can be interpreted as a voicing of the dominant public discourse at the time. The image of immigrant families as deficient does not support an awareness of other possible resources (Alrø, Skovsmose & Valero, 2008), and this might explain why the teacher did not recognise them in the case of Kalila.

In the Danish PISA-reports the immigrant students are reported – on average - to get less help from their parents and to draw on a wider range of other resources, such as, siblings, friends, homework cafes, libraries, to support their homework compared to the native students (Egelund et al., 2007; Egelund & Rangvid, 2005). Kalila and Maha exemplified this. As often seen in immigrant families of non-Western origin there were more children in their families than usual in native Danish families. Being among the younger children in their family, they had older siblings that had gone to Danish primary, lower secondary, and perhaps upper secondary school. In the interview, the teacher described Maha's big sister as a "bright and really intelligent" student. Thus, it would seem that they were well qualified for helping their younger siblings because of their knowledge of Danish and familiarity with the implicated norms and values of the Danish folkeskole. Compared to their parents, these sisters were likely to be better with academic Danish and insights into the social practices of Danish school mathematics. Hence, letting big sisters provide homework support for younger siblings could be seen as a sensible and responsible disposition for immigrant families in supporting their children's schooling. In addition to this general argument, the concrete help provided by the sisters of Kalila and Maha seemed to be in accord with that provided at school.

#### Normality and difficulties

The dominant discourse explaining non-Western immigrant students' academic performances by deficiencies in their families and normalising parental support for homework seemed to affect Kalila as well as the teacher. To the teacher the discourse corresponded to and allowed the expression of her frustrating experiences with immigrant students. It also seemed to make her overlook resources actually available to some students like the apparently competent sisters of Kalila and Maha.

For Kalila, the public discourse could have resulted in non-recognition of the support her family provided for her. The discourse required parents to help their children with their homework, and the absence of such help was taken as an expression of lacking interest in their children's school attendance. Kalila told a story about her father helping her when generally it was her sister. A possible interpretation is that Kalila had perceived the Danish majority definition of proper homework support and that she tried to position herself and her family as normal in this respect. She seemed to align her perception of homework support with the dominant discourse in spite of the fact that this did not recognise and valorise her actual support. Instead, it constructed her parents as inadequate because they did not personally help her with homework. If this interpretation is valid, it is an example of homework as a meeting place between school and home, in this case a meeting of conflicting norms about how families should operate. Placed at the intersection of school and home, Kalila bears the burden of having the support her family provides for her devalued by the dominant discourse.

My observations suggested that it was not easy for Kalila to learn school mathematics. She struggled and only achieved limited success. It seems reasonable to contend that recognition of her home support may have been useful in providing her with extra support. This would be the argument from an inclusion perspective, which implies moving the focus from shortcomings of individual students to structures, attitudes, social and pedagogical practices that hinder students' participation in the school and learning community (Booth, Ainscow, Baltzer & Tetler, 2004). A recent evaluation of the education of bilingual students in the Danish folkeskole recommended schools to reorganise and develop their practices to better include immigrant students (Danmarks Evalueringsinstitut, 2007). Other researchers criticised the PISA Etnisk report for tacitly assuming that the school is a culturally and socially neutral space. The demands made on families are culturally dependent and require a certain normality to fulfil. The school as an institution tends to recognise "white" middle class children's experiences and overlook the experiences of immigrant children (Gilliam & Gitz-Johansen, 2007).

Becoming aware of the mechanisms by which immigrant students are constructed as disadvantaged could open up the development of practices that better facilitated immigrant students' learning of mathematics. As homework is contested in respect of learning outcome and hits students very differently, a serious reconsideration of homework as a pedagogical practice seems to be justified. However, reconstructing discourses about immigrants and homework is the responsibility of governments, politicians, school authorities, and the public and not the sole responsibility of individual teachers.

# Afterword

Four months after the release of the *PISA Etnisk* report an erratum was announced. In had turned out that the conclusion about the communication in immigrant families was incorrect. Instead, the general picture was that Danish immigrant youth talked a little more with their parents than in an average OECD family, yet still less than in average native Danish families do. Hence the main explanation for the immigrant students' lower school performances now was the immigrant parents' on average weaker position as to education, income and labour market status (Rockwool Fondens Forskningsenhed, 2007b).

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Homework and minority students in difficulty with learning mathematics

Valero, P. (2007). A socio-political look at equity in the school organization of mathematics education. *ZDM*. *The International Journal on Mathematics Education*, 39, 225–233.

#### Notes

1 The OECD terminology is used the paper. "Native students or non-immigrant students: Students with at least one parent born in the country of assessment. [...] Immigrant students: This group includes both first-generation students and second-generation students [...] First-generation students: Students born outside of the country of assessment whose parents are also foreign-born. Second-generation students: Students born in the country of assessment with foreign-born parents" (OECD, 2006, p. 14; my italics).

This terminology correspond to that of the Danish Statistical Bureau (Danmarks Statistik, 2007). In Danish educational settings, the standard term is *bilingual children*, which is defined in the Danish folkeskole Act as "children who have another mother tongue than Danish, and who only learn Danish by contact with the surrounding society, possibly through education of the school,." (FL § 4a, stk. 2, my translation)

- 2 Social and cultural communication was measured by indices formed from the students answers to the questions "How often does your parents': a. Discuss how you are at school? b. Sit and eat a main meal together with you? c. Take time to talk to you?" and "a. Discuss political or social issues with you? b. Discuss book, films, or television programs with you? c. Listen to classical music with you? (Egelund et al., 2007, p. 73; my translation)
- 3 The difference between the Danish expressions, "tale med" and "tale til", translated here to "talk to" and "talk at", is that the first implicates dialogue whereas the second signals directive monologue.
- 4 Names are pseudonyms.
- 5 In the transcript small sounds or comments by the listening person are indicated by (), hyphens (-) signal pauses, commas that the speaker starts again on a sentence, underscore (\_) inaudible words, and three dots (...) shows where bits of dialogue has been left out.
- 6 I am not aware of research about how Danish parents interact with their children in respect to homework in mathematics. In my interviews, there are a few indications ranging from a mother practicing multiplication tables with her daughter in a pleasant atmosphere, to recurring conflictridden situations with a father 'helping' his daughter in a rather directive way (Lange & Meaney, 2008). The US parents in a study by Shumow (2003) tended to be quite directive in their help with arithmetic homework.

# **Troels Lange**

Troels Lange is a senior lecturer in mathematics at VIA College of Education and a Ph.D. student at Aalborg University. His research interest are children's perspectives on mathematics teaching and learning, especially on learning difficulties in mathematics.

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# Sammendrag

I artiklen modstilles en 10-årig piges opfattelse af den støtte hun får fra sit hjem og hendes matematiklæreren noget anderledes opfattelse. Pigen tilhører en minoritet i Danmark idet hendes forældre er indvandret fra Mellemøsten. I artiklen vises dels hvordan pigen prøver af tilpasse sin opfattelse af sit hjems støtte til den indfødte danske majoritets normalitetsforestillinger, og dels hvordan den offentlige diskurs om immigranter tilsyneladende former lærerens opfattelse af de ressourcer pigens familie råder over. Analysen er et eksempel på hvorledes matematikundervisning er indlejret i et socio-politisk felt. Den antyder at der kan være ressourcer til stede i minoritetsbørns familier som skolen ikke har øje for, fordi den offentlige diskurs konstruerer minoritetselever elever som underprivilegerede.